Geosyntec consultants

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Memorandum

Date:	May 20, 2021
To:	Matthew J. Ohl (United States Environmental Protection Agency)
From:	Julie Konzuk, Suzanne O'Hara, Gary Wealthall, Geosyntec Consultants
Copies to:	Norman Bernstein, Peter Racher, Thomas Krueger, Douglas Petroff, Mark Nichter, William Clabaugh, Corey Knox, David Becker, Jason Miller, Andy Gremos
Subject:	Data Summary, Stage 1: Sump Cleanout (Revision 1) Third Site DNAPL Cell Post-Thermal Remediation Approach

INTRODUCTION

The *Proposed Work Plan for the Third Site DNAPL Cell Post-Thermal Remediation Approach* (Work Plan) was provided to the United Stated Environmental Protection Agency (USEPA) on January 15, 2021 (Geosyntec, 2021a)[1]. This Work Plan presented a proposed path forward for post-thermal remediation of residual volatile organic compound (VOC) contamination in the dense, non-aqueous phase liquid (DNAPL) Cell at Third Site (the Site) located at 985 S. US Highway 421 in Zionsville, Indiana.

As discussed in the Work Plan, the specific objectives of the field activities proposed in the Work Plan are to:

- Remove any residual contaminant mass that may have accumulated in the sumps of wells;
- Treat remaining elevated total VOC concentrations persisting around P-1 in both the Upper and Lower Till to reduce total VOC concentrations in P-1 below the 4,250 µg/L total VOC target specified in ENVIRON (2008) and McMillan McGee (MM; 2018); and

[1] Geosyntec, 2021a. Memorandum re: *Proposed Work Plan for the Third Site DNAPL Cell Post-Thermal Remediation Approach*, January 15, 2021.

- Break down the DNAPL discovered at PSGS-11.

The proposed treatment program was divided into a four-stage process, including: 1) sump cleanout, 2) carbon substrate injections, 3) performance monitoring, and 4) post-bioremediation sampling. This memo addresses the work completed to address Stage 1: sump cleanout.

Ramboll conducted the cleaning of the sumps on February 1, 2021 in wells P-1, X-D3 and X-D4. These three wells contained elevated total VOC concentrations, with higher concentrations in the deeper sample interval compared with the shallow interval (~37 feet below ground surface [ft bgs] compared with ~25 ft bgs), when the well was sampled in April 2020 (Geosyntec, 2020). The higher concentrations in the deeper intervals may suggest residual material collected in the sump of each well was acting as a source to persisting and elevated groundwater concentrations; thus, the sump cleaning was intended to remove any residual mass that may have collected in the sump.

APPROACH

Prior to the sump cleaning, the depth to bottom of P-1, X-D3, and X-D4 was measured using an interface probe to assess if DNAPL may be present prior to pumping and to provide a baseline to confirm the extent of sediment removal. A groundwater sample with some suspended sediment was collected by Ramboll prior to well development just above the level of the sediment at the base of the wells using a pump lowered to the bottom of each well. Well purging did not occur prior to groundwater sample collection. Groundwater samples collected prior to the sump cleaning were not field filtered. EPA requested that a sample of sediment be collected (EPA email dated January 19, 2021), however, it was not possible to collect a sample of the sediment itself due to the cleaning method used[2]. The groundwater samples were analyzed for VOCs as well as pH, temperature, and oxidation-reduction potential (ORP) as requested by USEPA in the email from Matthew Ohl dated January 19, 2021.

After the sampling, the sump cleaning was done by SCS Environmental Contracting using a Mongoose Sewer Jetter tool to remove sediment from the sumps of P-1, X-D3, and X-D4. The work was overseen by Ramboll field staff. A tee-wye (TY) fitting was connected to the top of each well. A ½" hose with adapter, connected to a potable water source, was lowered to the bottom of each well through the fitting. The other side of the fitting was connected to a drum vac to induce a vacuum on the well. The drilling contractor injected water into the sump of each well while the

[2] In the email dated January 19, 2021, USEPA had requested that "the material" in the sumps be characterized for VOCs, pH, temperature, and ORP. Because of the method of well development that was used (i.e., vacuum extraction combined with water jetting), it was not possible to collect a sample of undisturbed sediment. Collection of the groundwater sample as close to the bottom of the well as possible and without purging the well or field-filtering the sample was undertaken with the hopes of capturing some of the sediment as well.

well was under vacuum. Sediment and water were forced under pressure from the introduced water and under vacuum from the drum vac, up and out of the well, and collected into a steel 55-gallon drum. The flow rate of potable water into the bottom of the well ranged from approximately 5 to 15 gallons per minute and was adjusted to maintain sufficient flow and sediment removal. Once the sediment was removed and well development was complete, the depth to the bottom of the well measurement was repeated to confirm the amount of sediment removed.

FINDINGS

DNAPL was not detected in any of the wells with the interface probe prior to well redevelopment or after well redevelopment. Depths to the bottom of the wells before and after cleaning are summarized in **Table 1**. Cleaning of the sumps resulted in removal of at least 2.4 to 3.5 feet (ft) of accumulated sediment in two of the wells (P-1 and X-D3). In X-D4, 0.39 ft of accumulated sediment was removed.

Of note, the total depth of the wells after removal of the accumulated sediment was completed, were 1.2 to 1.9 ft deeper than the MM design for the Electrical Resistivity Heating (ERH) treatment (MM, 2018)[3]. The design of these wells was to extend down to 40 feet below ground surface (ft bgs) with a 1 ft sump (i.e., total depth of 41 ft bgs). As seen in **Table 1**, the installed depth of each well was over 42 ft bgs and closer to 43 ft bgs at P-1 and X-D3. As such, the sand pack surrounding the screened intervals on the P-1, X-D3, and X-D4 wells would extend down to nearly 43 ft bgs. As a comparison, solvent odor and sheen was detected in PSGS-11 at a depth of approximately 42 ft bgs and elevated concentrations and DNAPL was detected at 44 ft bgs (Geosyntec, 2021b)[4]. If the construction of these wells is typical, then the sand pack of one or more of the X-D# and P-# wells could have provided a direct pathway for DNAPL to migrate into the Lower Till unit to a depth ranging between 43 to 44 ft bgs during the early heating phases when volatilization was not occurring. Once in the Lower Till below the ERH target treatment zone, heating was not sufficient to volatilize the DNAPL and vacuum extraction was ineffective, resulting in an inability for the current ERH system to treat the DNAPL that had mobilized beneath the target treatment zone.

Table 2 provides a summary of the VOC concentrations that were detected in the pre-development groundwater sample collected from the very bottom of each well. The laboratory report is attached to this memorandum in **Attachment A**. At P-1, the elevated trichloroethene (TCE), 1,2-dichlorobenzene (1,2-DCB) and total xylenes that were detected in the sample collected from 36.5 ft bgs in April 2020 (26,700 µg/L, 33,600 µg/L, and 11,500 µg/L respectively; as reported in Table

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[3] McMillan-McGee, 2018. *Remedial Design Report, Third Site ERH, Zionsville, Indiana.* April 23, 2018.
[4] Geosyntec, 2021b. *Third Site DNAPL Containment Area Supplemental Sampling Report, Revision 2*, January 11, 2021.

3 of Geosyntec, 2021b) were not observed from the sample collected from 39.5 ft bgs prior to the sump cleanout. A slight sheen was observed in the sample, but the concentrations detected in the sample (which are primarily the daughter product cis-1,2-dichloroethene [cDCE]) are not consistent with the presence of DNAPL. The Total VOC results from XD-3 and XD-4 (5,395 and 1,782 µg/L, respectively in February 2021) were significantly lower than P-1 and also lower than the samples collected from ~38 ft bgs in April 2020 (6,950 and 7,013 µg/L, respectively).

Table 2 also presents the pH, temperature, and ORP data for the samples collected from each well. The neutral pH and negative ORPs observed in samples collected at P-1 and XD-4 reflect conditions that are conducive to anaerobic biodegradation, which is also supported by the presence of daughter products (in particular cDCE) in these wells. The geochemistry in X-D3 appears to be slightly different, with more acidic conditions and positive ORP; however, these VOC concentrations in this well are again heavily weighted towards the daughter product cDCE, similar to the other two wells.

In summary, these data indicate that the elevated concentrations of parent products TCE, 1,2-DCB and total xylenes detected at 36.5 ft bgs in P-1 in April 2020 was not due to DNAPL accumulation in the sump of P-1. As seen on the depth discrete plots of soil concentrations at PSGS-3 and PSGS-4 (located in close proximity to P-1) provided in Geosyntec (2021b) and included in **Attachment B**, elevated concentrations of TCE and 1,2-DCB sorbed to soil were observed in the upper portion of the Lower Till (in and around 33 ft bgs), which is the more likely source for the elevated concentrations in the deeper of the two groundwater samples collected in P-1 in April 2020.

* * * *

TABLES

TABLE 1
Depth to Well Bottom Pre-/Post- Sump Cleaning - February 1, 2021
DNAPL Containment Area
Third Site Superfund Site, Zionsville, Indiana

LOCATION	P-1	X-D3	X-D4
GAUGING DATE	2/1/2021	2/1/2021	2/1/2021
Initial Depth to Bottom (ft)	39.23	40.53	41.81
Initial Depth to Water (ft)	7.24	7.48	7.45
Depth to Bottom - Post Cleanout (ft)	42.75	42.93	42.20
Feet of sediment removed (ft)	3.52	2.40	0.39

NOTE:
Depths reported in feet below ground surface.

TABLE 2
Samples from Sump Cleaning - February 1, 2021
DNAPL Containment Area
Third Site Superfund Site, Zionsville, Indiana

LOCATION	P-1	P-1	X-D3	X-D3	X-D4	X-D4
SAMPLE DEPTH	36.5'	39.2'	37.5'	40.5'	38.2'	41.8'
COLLECTION DATE	4/28/2020	2/1/2021	4/29/2020	2/1/2021	4/29/2020	2/1/2021
1,1-Dichloroethane	4,870	95.5	<10	<10	<5	<10
1,1-Dichloroethene	7,950	199	66	40.0	13	<10
cis-1,2-Dichloroethene	10,700	34,200	3,550 J	4,760	5,770 J	1,700
trans-1,2-Dichlorothene	1,310	172	65.2	36.8	21.0 J	<10
Tetrachloroethene	6,040	<10	<10	<10	8.8	<10
1,1,1-Trichloroethane	<50	<10	<10	<10	<5	<10
1,1,2-Trichloroethane	<50	<10	<10	<10	<5	<10
Trichloroethene	26,700	207	2,500	333	1,020	33.5
Vinyl Chloride	221	1,330	10.8	36.3	<5	13.0
1,2-Dichlorobenzene	33,600	1,680	648	189	142 J	35.8
Ethylbenzene	6,530	307	<10	<10	6.6	<10
Toluene	890	43.4	<10	<10	5.2	<10
Xylene (Total)	11,500	318	110 J	<30	26.3 J	<30
Total VOCs	110,311	38,552	6,950	5,395	7,013	1,782
Additional Analyses[1]						
pH (Std. units)	NA	6.79	NA	4.73	NA	6.90
Temperature (°C)	NA	15.16	NA	12.71	NA	18.24
Oxidation-Reduction Potential (mV)	NA	-106	NA	233	NA	-37
NAPL (Present - Yes or No)	No	No (slight Sheen)	No	No	No	No

NOTES:

Groundwater samples were collected just above the level of the sediment at the base of the wells using a pump lowered to the bottom of each well (as described on Page 2).

Well purging and/or development did not occur prior to groundwater sampling collection.

Sample depth reported in feet below ground surface.

Samples analyzed using EPA Method 8260.

VOC results in microgram per liter (ug/L).

(1) Additional analyses requested by USEPA on January 19, 2021.

ACRONYMS:

mV - milliVolts

NA - Not applicable

NAPL - No Aqueous Phase Liquid

VOC - Volatile Organic Compound

ATTACHMENT A

Laboratory Report

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

February 04, 2021

Mr. Chuck Goodwin
Ramboll Environ
One Indiana Square
Suite 2335
Indianapolis, IN 46204

RE: Project: Third Site
Pace Project No.: 50278956

Dear Mr. Goodwin:

Enclosed are the analytical results for sample(s) received by the laboratory on February 01, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mick Mayse

Mick Mayse
mick.mayse@pacelabs.com
(317)228-3100
Project Manager

Enclosures

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

CERTIFICATIONS

Project: Third Site
Pace Project No.: 50278956

Pace Analytical Services Indianapolis
7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Wisconsin Laboratory #: 999788130
USDA Soil Permit #: P330-19-00257

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SAMPLE SUMMARY

Project: Third Site
Pace Project No.: 50278956

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50278956001	**Trip Blank**	Water	02/01/21 08:00	02/01/21 12:37
50278956002	**X-D3**	Water	02/01/21 10:06	02/01/21 12:37
50278956003	**X-D4**	Water	02/01/21 10:20	02/01/21 12:37
50278956004	**P-1**	Water	02/01/21 10:40	02/01/21 12:37

Pace Analytical Services, LLC
7726 Moller Road
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(317)228-3100

SAMPLE ANALYTE COUNT

Project: Third Site
Pace Project No.: 50278956

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50278956001	**Trip Blank**	EPA 5030B/8260	KLP	73	PASI-I
50278956002	**X-D3**	EPA 5030B/8260	KLP	73	PASI-I
50278956003	**X-D4**	EPA 5030B/8260	KLP	73	PASI-I
50278956004	**P-1**	EPA 5030B/8260	KLP	73	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

SUMMARY OF DETECTION

Project: Third Site
Pace Project No.: 50278956

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
50278956002	**X-D3**					
EPA 5030B/8260	1,2-Dichlorobenzene	189	ug/L	10.0	02/02/21 14:48	
EPA 5030B/8260	1,1-Dichloroethene	40.0	ug/L	10.0	02/02/21 14:48	
EPA 5030B/8260	cis-1,2-Dichloroethene	4760	ug/L	50.0	02/02/21 15:21	
EPA 5030B/8260	trans-1,2-Dichloroethene	36.8	ug/L	10.0	02/02/21 14:48	
EPA 5030B/8260	Trichloroethene	333	ug/L	10.0	02/02/21 14:48	
EPA 5030B/8260	Vinyl chloride	36.3	ug/L	10.0	02/02/21 14:48	
50278956003	**X-D4**					
EPA 5030B/8260	1,2-Dichlorobenzene	35.8	ug/L	10.0	02/02/21 15:53	
EPA 5030B/8260	cis-1,2-Dichloroethene	1700	ug/L	10.0	02/02/21 15:53	
EPA 5030B/8260	Trichloroethene	33.5	ug/L	10.0	02/02/21 15:53	
EPA 5030B/8260	Vinyl chloride	13.0	ug/L	10.0	02/02/21 15:53	
50278956004	**P-1**					
EPA 5030B/8260	1,2-Dichlorobenzene	1680	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	1,1-Dichloroethane	95.5	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	1,1-Dichloroethene	199	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	cis-1,2-Dichloroethene	34200	ug/L	500	02/03/21 12:44	
EPA 5030B/8260	trans-1,2-Dichloroethene	172	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	Ethylbenzene	307	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	Toluene	43.4	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	Trichloroethene	207	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	Vinyl chloride	1330	ug/L	10.0	02/02/21 16:59	
EPA 5030B/8260	Xylene (Total)	318	ug/L	30.0	02/02/21 16:59	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

PROJECT NARRATIVE

Project: Third Site
Pace Project No.: 50278956

Method: **EPA 5030B/8260**
Description: 8260 MSV Low Level
Client: Ramboll US Consulting
Date: February 04, 2021

General Information:
4 samples were analyzed for EPA 5030B/8260 by Pace Analytical Services Indianapolis. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 604765

D4: Sample was diluted due to the presence of high levels of target analytes.

- P-1 (Lab ID: 50278956004)
  - 4-Bromofluorobenzene (S)
- X-D3 (Lab ID: 50278956002)
  - 4-Bromofluorobenzene (S)
- X-D4 (Lab ID: 50278956003)
  - 4-Bromofluorobenzene (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: Trip Blank **Lab ID: 50278956001** Collected: 02/01/21 08:00 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	20.0	5.0	1		02/02/21 13:42	67-64-1	
Acrolein	ND	ug/L	20.0	9.9	1		02/02/21 13:42	107-02-8	
Acrylonitrile	ND	ug/L	100	5.0	1		02/02/21 13:42	107-13-1	
Benzene	ND	ug/L	1.0	0.68	1		02/02/21 13:42	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.71	1		02/02/21 13:42	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.60	1		02/02/21 13:42	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.49	1		02/02/21 13:42	75-27-4	
Bromoform	ND	ug/L	1.0	0.68	1		02/02/21 13:42	75-25-2	
Bromomethane	ND	ug/L	5.0	5.0	1		02/02/21 13:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	20.0	2.0	1		02/02/21 13:42	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.39	1		02/02/21 13:42	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.31	1		02/02/21 13:42	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.41	1		02/02/21 13:42	98-06-6	
Carbon disulfide	ND	ug/L	5.0	0.51	1		02/02/21 13:42	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	0.63	1		02/02/21 13:42	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.61	1		02/02/21 13:42	108-90-7	
Chloroethane	ND	ug/L	2.0	0.66	1		02/02/21 13:42	75-00-3	
Chloroform	ND	ug/L	1.0	0.66	1		02/02/21 13:42	67-66-3	
Chloromethane	ND	ug/L	2.0	0.61	1		02/02/21 13:42	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.49	1		02/02/21 13:42	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.62	1		02/02/21 13:42	106-43-4	
Dibromochloromethane	ND	ug/L	1.0	0.54	1		02/02/21 13:42	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.51	1		02/02/21 13:42	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.55	1		02/02/21 13:42	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.60	1		02/02/21 13:42	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.52	1		02/02/21 13:42	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.58	1		02/02/21 13:42	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	100	2.6	1		02/02/21 13:42	110-57-6	
Dichlorodifluoromethane	ND	ug/L	2.0	0.91	1		02/02/21 13:42	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.66	1		02/02/21 13:42	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.67	1		02/02/21 13:42	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.59	1		02/02/21 13:42	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.69	1		02/02/21 13:42	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.62	1		02/02/21 13:42	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	0.71	1		02/02/21 13:42	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.61	1		02/02/21 13:42	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	0.50	1		02/02/21 13:42	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.66	1		02/02/21 13:42	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	0.55	1		02/02/21 13:42	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	0.15	1		02/02/21 13:42	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	0.56	1		02/02/21 13:42	100-41-4	
Ethyl methacrylate	ND	ug/L	20.0	6.0	1		02/02/21 13:42	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1.0	1		02/02/21 13:42	87-68-3	
n-Hexane	ND	ug/L	5.0	1.6	1		02/02/21 13:42	110-54-3	
2-Hexanone	ND	ug/L	20.0	2.4	1		02/02/21 13:42	591-78-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: Trip Blank **Lab ID: 50278956001** Collected: 02/01/21 08:00 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis								
Iodomethane	ND	ug/L	5.0	2.1	1		02/02/21 13:42	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.59	1		02/02/21 13:42	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.45	1		02/02/21 13:42	99-87-6	
Methylene Chloride	ND	ug/L	5.0	1.0	1		02/02/21 13:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	20.0	4.3	1		02/02/21 13:42	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	4.0	0.44	1		02/02/21 13:42	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.61	1		02/02/21 13:42	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.46	1		02/02/21 13:42	103-65-1	
Styrene	ND	ug/L	1.0	0.55	1		02/02/21 13:42	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.55	1		02/02/21 13:42	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.47	1		02/02/21 13:42	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.71	1		02/02/21 13:42	127-18-4	
Toluene	ND	ug/L	1.0	0.57	1		02/02/21 13:42	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.42	1		02/02/21 13:42	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.47	1		02/02/21 13:42	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.53	1		02/02/21 13:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.36	1		02/02/21 13:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.60	1		02/02/21 13:42	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	0.39	1		02/02/21 13:42	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.51	1		02/02/21 13:42	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	0.56	1		02/02/21 13:42	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	0.55	1		02/02/21 13:42	108-67-8	
Vinyl acetate	ND	ug/L	20.0	1.5	1		02/02/21 13:42	108-05-4	
Vinyl chloride	ND	ug/L	1.0	0.39	1		02/02/21 13:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1.3	1		02/02/21 13:42	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%.	85-116		1		02/02/21 13:42	460-00-4	
Dibromofluoromethane (S)	103	%.	75-120		1		02/02/21 13:42	1868-53-7	
Toluene-d8 (S)	98	%.	83-111		1		02/02/21 13:42	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: X-D3 **Lab ID: 50278956002** Collected: 02/01/21 10:06 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	200	50.0	10		02/02/21 14:48	67-64-1	
Acrolein	ND	ug/L	200	99.2	10		02/02/21 14:48	107-02-8	
Acrylonitrile	ND	ug/L	1000	50.1	10		02/02/21 14:48	107-13-1	
Benzene	ND	ug/L	10.0	6.8	10		02/02/21 14:48	71-43-2	
Bromobenzene	ND	ug/L	10.0	7.1	10		02/02/21 14:48	108-86-1	
Bromochloromethane	ND	ug/L	10.0	6.0	10		02/02/21 14:48	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	4.9	10		02/02/21 14:48	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		02/02/21 14:48	75-25-2	
Bromomethane	ND	ug/L	50.0	50.0	10		02/02/21 14:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	20.0	10		02/02/21 14:48	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	3.9	10		02/02/21 14:48	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	3.1	10		02/02/21 14:48	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	4.1	10		02/02/21 14:48	98-06-6	
Carbon disulfide	ND	ug/L	50.0	5.1	10		02/02/21 14:48	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	6.3	10		02/02/21 14:48	56-23-5	
Chlorobenzene	ND	ug/L	10.0	6.1	10		02/02/21 14:48	108-90-7	
Chloroethane	ND	ug/L	20.0	6.6	10		02/02/21 14:48	75-00-3	
Chloroform	ND	ug/L	10.0	6.6	10		02/02/21 14:48	67-66-3	
Chloromethane	ND	ug/L	20.0	6.1	10		02/02/21 14:48	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	4.9	10		02/02/21 14:48	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	6.2	10		02/02/21 14:48	106-43-4	
Dibromochloromethane	ND	ug/L	10.0	5.4	10		02/02/21 14:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	5.1	10		02/02/21 14:48	106-93-4	
Dibromomethane	ND	ug/L	10.0	5.5	10		02/02/21 14:48	74-95-3	
1,2-Dichlorobenzene	**189**	ug/L	10.0	6.0	10		02/02/21 14:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.2	10		02/02/21 14:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.8	10		02/02/21 14:48	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1000	26.3	10		02/02/21 14:48	110-57-6	
Dichlorodifluoromethane	ND	ug/L	20.0	9.1	10		02/02/21 14:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	6.6	10		02/02/21 14:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	6.7	10		02/02/21 14:48	107-06-2	
1,1-Dichloroethene	**40.0**	ug/L	10.0	5.9	10		02/02/21 14:48	75-35-4	
cis-1,2-Dichloroethene	**4760**	ug/L	50.0	34.5	50		02/02/21 15:21	156-59-2	
trans-1,2-Dichloroethene	**36.8**	ug/L	10.0	6.2	10		02/02/21 14:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	7.1	10		02/02/21 14:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	6.1	10		02/02/21 14:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	5.0	10		02/02/21 14:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	6.6	10		02/02/21 14:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	5.5	10		02/02/21 14:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.5	10		02/02/21 14:48	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	5.6	10		02/02/21 14:48	100-41-4	
Ethyl methacrylate	ND	ug/L	200	59.6	10		02/02/21 14:48	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	10.0	10		02/02/21 14:48	87-68-3	
n-Hexane	ND	ug/L	50.0	16.2	10		02/02/21 14:48	110-54-3	
2-Hexanone	ND	ug/L	200	24.0	10		02/02/21 14:48	591-78-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: X-D3 **Lab ID: 50278956002** Collected: 02/01/21 10:06 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Indianapolis								
Iodomethane	ND	ug/L	50.0	20.9	10		02/02/21 14:48	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	5.9	10		02/02/21 14:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	4.5	10		02/02/21 14:48	99-87-6	
Methylene Chloride	ND	ug/L	50.0	10.0	10		02/02/21 14:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	43.1	10		02/02/21 14:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	40.0	4.4	10		02/02/21 14:48	1634-04-4	
Naphthalene	ND	ug/L	10.0	6.1	10		02/02/21 14:48	91-20-3	
n-Propylbenzene	ND	ug/L	10.0	4.6	10		02/02/21 14:48	103-65-1	
Styrene	ND	ug/L	10.0	5.5	10		02/02/21 14:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.5	10		02/02/21 14:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	4.7	10		02/02/21 14:48	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	7.1	10		02/02/21 14:48	127-18-4	
Toluene	ND	ug/L	10.0	5.7	10		02/02/21 14:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	4.2	10		02/02/21 14:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	4.7	10		02/02/21 14:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	5.3	10		02/02/21 14:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	3.6	10		02/02/21 14:48	79-00-5	
Trichloroethene	**333**	ug/L	10.0	6.0	10		02/02/21 14:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	3.9	10		02/02/21 14:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	5.1	10		02/02/21 14:48	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	50.0	5.6	10		02/02/21 14:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	50.0	5.5	10		02/02/21 14:48	108-67-8	
Vinyl acetate	ND	ug/L	200	15.2	10		02/02/21 14:48	108-05-4	
Vinyl chloride	**36.3**	ug/L	10.0	3.9	10		02/02/21 14:48	75-01-4	
Xylene (Total)	ND	ug/L	30.0	12.7	10		02/02/21 14:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%.	85-116		10		02/02/21 14:48	460-00-4	D4
Dibromofluoromethane (S)	103	%.	75-120		10		02/02/21 14:48	1868-53-7	
Toluene-d8 (S)	98	%.	83-111		10		02/02/21 14:48	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: X-D4 **Lab ID: 50278956003** Collected: 02/01/21 10:20 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	200	50.0	10		02/02/21 15:53	67-64-1	
Acrolein	ND	ug/L	200	99.2	10		02/02/21 15:53	107-02-8	
Acrylonitrile	ND	ug/L	1000	50.1	10		02/02/21 15:53	107-13-1	
Benzene	ND	ug/L	10.0	6.8	10		02/02/21 15:53	71-43-2	
Bromobenzene	ND	ug/L	10.0	7.1	10		02/02/21 15:53	108-86-1	
Bromochloromethane	ND	ug/L	10.0	6.0	10		02/02/21 15:53	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	4.9	10		02/02/21 15:53	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		02/02/21 15:53	75-25-2	
Bromomethane	ND	ug/L	50.0	50.0	10		02/02/21 15:53	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	20.0	10		02/02/21 15:53	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	3.9	10		02/02/21 15:53	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	3.1	10		02/02/21 15:53	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	4.1	10		02/02/21 15:53	98-06-6	
Carbon disulfide	ND	ug/L	50.0	5.1	10		02/02/21 15:53	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	6.3	10		02/02/21 15:53	56-23-5	
Chlorobenzene	ND	ug/L	10.0	6.1	10		02/02/21 15:53	108-90-7	
Chloroethane	ND	ug/L	20.0	6.6	10		02/02/21 15:53	75-00-3	
Chloroform	ND	ug/L	10.0	6.6	10		02/02/21 15:53	67-66-3	
Chloromethane	ND	ug/L	20.0	6.1	10		02/02/21 15:53	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	4.9	10		02/02/21 15:53	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	6.2	10		02/02/21 15:53	106-43-4	
Dibromochloromethane	ND	ug/L	10.0	5.4	10		02/02/21 15:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	5.1	10		02/02/21 15:53	106-93-4	
Dibromomethane	ND	ug/L	10.0	5.5	10		02/02/21 15:53	74-95-3	
1,2-Dichlorobenzene	**35.8**	ug/L	10.0	6.0	10		02/02/21 15:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.2	10		02/02/21 15:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.8	10		02/02/21 15:53	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1000	26.3	10		02/02/21 15:53	110-57-6	
Dichlorodifluoromethane	ND	ug/L	20.0	9.1	10		02/02/21 15:53	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	6.6	10		02/02/21 15:53	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	6.7	10		02/02/21 15:53	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	5.9	10		02/02/21 15:53	75-35-4	
cis-1,2-Dichloroethene	**1700**	ug/L	10.0	6.9	10		02/02/21 15:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	6.2	10		02/02/21 15:53	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	7.1	10		02/02/21 15:53	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	6.1	10		02/02/21 15:53	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	5.0	10		02/02/21 15:53	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	6.6	10		02/02/21 15:53	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	5.5	10		02/02/21 15:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.5	10		02/02/21 15:53	10061-02-6	
Ethylbenzene	ND	ug/L	10.0	5.6	10		02/02/21 15:53	100-41-4	
Ethyl methacrylate	ND	ug/L	200	59.6	10		02/02/21 15:53	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	10.0	10		02/02/21 15:53	87-68-3	
n-Hexane	ND	ug/L	50.0	16.2	10		02/02/21 15:53	110-54-3	
2-Hexanone	ND	ug/L	200	24.0	10		02/02/21 15:53	591-78-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: X-D4 **Lab ID: 50278956003** Collected: 02/01/21 10:20 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Indianapolis								
Iodomethane	ND	ug/L	50.0	20.9	10		02/02/21 15:53	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	5.9	10		02/02/21 15:53	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	4.5	10		02/02/21 15:53	99-87-6	
Methylene Chloride	ND	ug/L	50.0	10.0	10		02/02/21 15:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	43.1	10		02/02/21 15:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	40.0	4.4	10		02/02/21 15:53	1634-04-4	
Naphthalene	ND	ug/L	10.0	6.1	10		02/02/21 15:53	91-20-3	
n-Propylbenzene	ND	ug/L	10.0	4.6	10		02/02/21 15:53	103-65-1	
Styrene	ND	ug/L	10.0	5.5	10		02/02/21 15:53	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.5	10		02/02/21 15:53	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	4.7	10		02/02/21 15:53	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	7.1	10		02/02/21 15:53	127-18-4	
Toluene	ND	ug/L	10.0	5.7	10		02/02/21 15:53	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	4.2	10		02/02/21 15:53	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	4.7	10		02/02/21 15:53	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	5.3	10		02/02/21 15:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	3.6	10		02/02/21 15:53	79-00-5	
Trichloroethene	**33.5**	ug/L	10.0	6.0	10		02/02/21 15:53	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	3.9	10		02/02/21 15:53	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	5.1	10		02/02/21 15:53	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	50.0	5.6	10		02/02/21 15:53	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	50.0	5.5	10		02/02/21 15:53	108-67-8	
Vinyl acetate	ND	ug/L	200	15.2	10		02/02/21 15:53	108-05-4	
Vinyl chloride	**13.0**	ug/L	10.0	3.9	10		02/02/21 15:53	75-01-4	
Xylene (Total)	ND	ug/L	30.0	12.7	10		02/02/21 15:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%.	85-116		10		02/02/21 15:53	460-00-4	D4
Dibromofluoromethane (S)	103	%.	75-120		10		02/02/21 15:53	1868-53-7	
Toluene-d8 (S)	98	%.	83-111		10		02/02/21 15:53	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: P-1 **Lab ID: 50278956004** Collected: 02/01/21 10:40 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis								
Acetone	ND	ug/L	200	50.0	10		02/02/21 16:59	67-64-1	
Acrolein	ND	ug/L	200	99.2	10		02/02/21 16:59	107-02-8	
Acrylonitrile	ND	ug/L	1000	50.1	10		02/02/21 16:59	107-13-1	
Benzene	ND	ug/L	10.0	6.8	10		02/02/21 16:59	71-43-2	
Bromobenzene	ND	ug/L	10.0	7.1	10		02/02/21 16:59	108-86-1	
Bromochloromethane	ND	ug/L	10.0	6.0	10		02/02/21 16:59	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	4.9	10		02/02/21 16:59	75-27-4	
Bromoform	ND	ug/L	10.0	6.8	10		02/02/21 16:59	75-25-2	
Bromomethane	ND	ug/L	50.0	50.0	10		02/02/21 16:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	200	20.0	10		02/02/21 16:59	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	3.9	10		02/02/21 16:59	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	3.1	10		02/02/21 16:59	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	4.1	10		02/02/21 16:59	98-06-6	
Carbon disulfide	ND	ug/L	50.0	5.1	10		02/02/21 16:59	75-15-0	
Carbon tetrachloride	ND	ug/L	10.0	6.3	10		02/02/21 16:59	56-23-5	
Chlorobenzene	ND	ug/L	10.0	6.1	10		02/02/21 16:59	108-90-7	
Chloroethane	ND	ug/L	20.0	6.6	10		02/02/21 16:59	75-00-3	
Chloroform	ND	ug/L	10.0	6.6	10		02/02/21 16:59	67-66-3	
Chloromethane	ND	ug/L	20.0	6.1	10		02/02/21 16:59	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	4.9	10		02/02/21 16:59	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	6.2	10		02/02/21 16:59	106-43-4	
Dibromochloromethane	ND	ug/L	10.0	5.4	10		02/02/21 16:59	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	5.1	10		02/02/21 16:59	106-93-4	
Dibromomethane	ND	ug/L	10.0	5.5	10		02/02/21 16:59	74-95-3	
1,2-Dichlorobenzene	**1680**	ug/L	10.0	6.0	10		02/02/21 16:59	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.2	10		02/02/21 16:59	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.8	10		02/02/21 16:59	106-46-7	
trans-1,4-Dichloro-2-butene	ND	ug/L	1000	26.3	10		02/02/21 16:59	110-57-6	
Dichlorodifluoromethane	ND	ug/L	20.0	9.1	10		02/02/21 16:59	75-71-8	
1,1-Dichloroethane	**95.5**	ug/L	10.0	6.6	10		02/02/21 16:59	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	6.7	10		02/02/21 16:59	107-06-2	
1,1-Dichloroethene	**199**	ug/L	10.0	5.9	10		02/02/21 16:59	75-35-4	
cis-1,2-Dichloroethene	**34200**	ug/L	500	250	500		02/03/21 12:44	156-59-2	
trans-1,2-Dichloroethene	**172**	ug/L	10.0	6.2	10		02/02/21 16:59	156-60-5	
1,2-Dichloropropane	ND	ug/L	10.0	7.1	10		02/02/21 16:59	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	6.1	10		02/02/21 16:59	142-28-9	
2,2-Dichloropropane	ND	ug/L	10.0	5.0	10		02/02/21 16:59	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	6.6	10		02/02/21 16:59	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	10.0	5.5	10		02/02/21 16:59	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	10.0	1.5	10		02/02/21 16:59	10061-02-6	
Ethylbenzene	**307**	ug/L	10.0	5.6	10		02/02/21 16:59	100-41-4	
Ethyl methacrylate	ND	ug/L	200	59.6	10		02/02/21 16:59	97-63-2	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	10.0	10		02/02/21 16:59	87-68-3	
n-Hexane	ND	ug/L	50.0	16.2	10		02/02/21 16:59	110-54-3	
2-Hexanone	ND	ug/L	200	24.0	10		02/02/21 16:59	591-78-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

ANALYTICAL RESULTS

Project: Third Site
Pace Project No.: 50278956

Sample: P-1 **Lab ID: 50278956004** Collected: 02/01/21 10:40 Received: 02/01/21 12:37 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260								
	Pace Analytical Services - Indianapolis								
Iodomethane	ND	ug/L	50.0	20.9	10		02/02/21 16:59	74-88-4	
Isopropylbenzene (Cumene)	ND	ug/L	10.0	5.9	10		02/02/21 16:59	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	4.5	10		02/02/21 16:59	99-87-6	
Methylene Chloride	ND	ug/L	50.0	10.0	10		02/02/21 16:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	200	43.1	10		02/02/21 16:59	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	40.0	4.4	10		02/02/21 16:59	1634-04-4	
Naphthalene	ND	ug/L	10.0	6.1	10		02/02/21 16:59	91-20-3	
n-Propylbenzene	ND	ug/L	10.0	4.6	10		02/02/21 16:59	103-65-1	
Styrene	ND	ug/L	10.0	5.5	10		02/02/21 16:59	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.5	10		02/02/21 16:59	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	4.7	10		02/02/21 16:59	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	7.1	10		02/02/21 16:59	127-18-4	
Toluene	**43.4**	ug/L	10.0	5.7	10		02/02/21 16:59	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	4.2	10		02/02/21 16:59	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	4.7	10		02/02/21 16:59	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	5.3	10		02/02/21 16:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	3.6	10		02/02/21 16:59	79-00-5	
Trichloroethene	**207**	ug/L	10.0	6.0	10		02/02/21 16:59	79-01-6	
Trichlorofluoromethane	ND	ug/L	20.0	3.9	10		02/02/21 16:59	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	5.1	10		02/02/21 16:59	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	50.0	5.6	10		02/02/21 16:59	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	50.0	5.5	10		02/02/21 16:59	108-67-8	
Vinyl acetate	ND	ug/L	200	15.2	10		02/02/21 16:59	108-05-4	
Vinyl chloride	**1330**	ug/L	10.0	3.9	10		02/02/21 16:59	75-01-4	
Xylene (Total)	**318**	ug/L	30.0	12.7	10		02/02/21 16:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	99	%.	85-116		10		02/02/21 16:59	460-00-4	D4
Dibromofluoromethane (S)	102	%.	75-120		10		02/02/21 16:59	1868-53-7	
Toluene-d8 (S)	98	%.	83-111		10		02/02/21 16:59	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Third Site
Pace Project No.: 50278956

QC Batch: 604765
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Low Level
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50278956001, 50278956002, 50278956003, 50278956004

METHOD BLANK: 2787893 Matrix: Water
Associated Lab Samples: 50278956001, 50278956002, 50278956003, 50278956004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.55	02/02/21 13:10	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.53	02/02/21 13:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.47	02/02/21 13:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.36	02/02/21 13:10	
1,1-Dichloroethane	ug/L	ND	1.0	0.66	02/02/21 13:10	
1,1-Dichloroethene	ug/L	ND	1.0	0.59	02/02/21 13:10	
1,1-Dichloropropene	ug/L	ND	1.0	0.66	02/02/21 13:10	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.42	02/02/21 13:10	
1,2,3-Trichloropropane	ug/L	ND	1.0	0.51	02/02/21 13:10	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.47	02/02/21 13:10	
1,2,4-Trimethylbenzene	ug/L	ND	5.0	0.56	02/02/21 13:10	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.51	02/02/21 13:10	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.60	02/02/21 13:10	
1,2-Dichloroethane	ug/L	ND	1.0	0.67	02/02/21 13:10	
1,2-Dichloropropane	ug/L	ND	1.0	0.71	02/02/21 13:10	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	0.55	02/02/21 13:10	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.52	02/02/21 13:10	
1,3-Dichloropropane	ug/L	ND	1.0	0.61	02/02/21 13:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.58	02/02/21 13:10	
2,2-Dichloropropane	ug/L	ND	1.0	0.50	02/02/21 13:10	
2-Butanone (MEK)	ug/L	ND	20.0	2.0	02/02/21 13:10	
2-Chlorotoluene	ug/L	ND	1.0	0.49	02/02/21 13:10	
2-Hexanone	ug/L	ND	20.0	2.4	02/02/21 13:10	
4-Chlorotoluene	ug/L	ND	1.0	0.62	02/02/21 13:10	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20.0	4.3	02/02/21 13:10	
Acetone	ug/L	ND	20.0	5.0	02/02/21 13:10	
Acrolein	ug/L	ND	20.0	9.9	02/02/21 13:10	
Acrylonitrile	ug/L	ND	100	5.0	02/02/21 13:10	
Benzene	ug/L	ND	1.0	0.68	02/02/21 13:10	
Bromobenzene	ug/L	ND	1.0	0.71	02/02/21 13:10	
Bromochloromethane	ug/L	ND	1.0	0.60	02/02/21 13:10	
Bromodichloromethane	ug/L	ND	1.0	0.49	02/02/21 13:10	
Bromoform	ug/L	ND	1.0	0.68	02/02/21 13:10	
Bromomethane	ug/L	ND	5.0	5.0	02/02/21 13:10	
Carbon disulfide	ug/L	ND	5.0	0.51	02/02/21 13:10	
Carbon tetrachloride	ug/L	ND	1.0	0.63	02/02/21 13:10	
Chlorobenzene	ug/L	ND	1.0	0.61	02/02/21 13:10	
Chloroethane	ug/L	ND	2.0	0.66	02/02/21 13:10	
Chloroform	ug/L	ND	1.0	0.66	02/02/21 13:10	
Chloromethane	ug/L	ND	2.0	0.61	02/02/21 13:10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Third Site
Pace Project No.: 50278956

METHOD BLANK: 2787893 Matrix: Water
Associated Lab Samples: 50278956001, 50278956002, 50278956003, 50278956004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.69	02/02/21 13:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	0.55	02/02/21 13:10	
Dibromochloromethane	ug/L	ND	1.0	0.54	02/02/21 13:10	
Dibromomethane	ug/L	ND	1.0	0.55	02/02/21 13:10	
Dichlorodifluoromethane	ug/L	ND	2.0	0.91	02/02/21 13:10	
Ethyl methacrylate	ug/L	ND	20.0	6.0	02/02/21 13:10	
Ethylbenzene	ug/L	ND	1.0	0.56	02/02/21 13:10	
Hexachloro-1,3-butadiene	ug/L	1.3	1.0	1.0	02/02/21 13:10	
Iodomethane	ug/L	ND	5.0	2.1	02/02/21 13:10	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.59	02/02/21 13:10	
Methyl-tert-butyl ether	ug/L	ND	4.0	0.44	02/02/21 13:10	
Methylene Chloride	ug/L	ND	5.0	1.0	02/02/21 13:10	
n-Butylbenzene	ug/L	ND	1.0	0.39	02/02/21 13:10	
n-Hexane	ug/L	ND	5.0	1.6	02/02/21 13:10	
n-Propylbenzene	ug/L	ND	1.0	0.46	02/02/21 13:10	
Naphthalene	ug/L	ND	1.0	0.61	02/02/21 13:10	
p-Isopropyltoluene	ug/L	ND	1.0	0.45	02/02/21 13:10	
sec-Butylbenzene	ug/L	ND	1.0	0.31	02/02/21 13:10	
Styrene	ug/L	ND	1.0	0.55	02/02/21 13:10	
tert-Butylbenzene	ug/L	ND	1.0	0.41	02/02/21 13:10	
Tetrachloroethene	ug/L	ND	1.0	0.71	02/02/21 13:10	
Toluene	ug/L	ND	1.0	0.57	02/02/21 13:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.62	02/02/21 13:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	0.15	02/02/21 13:10	
trans-1,4-Dichloro-2-butene	ug/L	ND	100	2.6	02/02/21 13:10	
Trichloroethene	ug/L	ND	1.0	0.60	02/02/21 13:10	
Trichlorofluoromethane	ug/L	ND	2.0	0.39	02/02/21 13:10	
Vinyl acetate	ug/L	ND	20.0	1.5	02/02/21 13:10	
Vinyl chloride	ug/L	ND	1.0	0.39	02/02/21 13:10	
Xylene (Total)	ug/L	ND	3.0	1.3	02/02/21 13:10	
4-Bromofluorobenzene (S)	%.	100	85-116		02/02/21 13:10	
Dibromofluoromethane (S)	%.	102	75-120		02/02/21 13:10	
Toluene-d8 (S)	%.	98	83-111		02/02/21 13:10	

LABORATORY CONTROL SAMPLE: 2787894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	50.4	101	78-120	
1,1,1-Trichloroethane	ug/L	50	54.6	109	78-130	
1,1,2,2-Tetrachloroethane	ug/L	50	43.5	87	64-126	
1,1,2-Trichloroethane	ug/L	50	45.2	90	73-125	
1,1-Dichloroethane	ug/L	50	52.9	106	77-123	
1,1-Dichloroethene	ug/L	50	47.1	94	79-128	
1,1-Dichloropropene	ug/L	50	53.1	106	78-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Third Site
Pace Project No.: 50278956

LABORATORY CONTROL SAMPLE: 2787894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichlorobenzene	ug/L	50	47.1	94	75-126	
1,2,3-Trichloropropane	ug/L	50	44.1	88	71-131	
1,2,4-Trichlorobenzene	ug/L	50	50.2	100	76-130	
1,2,4-Trimethylbenzene	ug/L	50	49.3	99	76-119	
1,2-Dibromoethane (EDB)	ug/L	50	48.8	98	76-122	
1,2-Dichlorobenzene	ug/L	50	48.7	97	79-113	
1,2-Dichloroethane	ug/L	50	54.1	108	66-127	
1,2-Dichloropropane	ug/L	50	53.5	107	75-127	
1,3,5-Trimethylbenzene	ug/L	50	50.1	100	78-116	
1,3-Dichlorobenzene	ug/L	50	48.9	98	79-120	
1,3-Dichloropropane	ug/L	50	48.8	98	81-121	
1,4-Dichlorobenzene	ug/L	50	48.0	96	77-117	
2,2-Dichloropropane	ug/L	50	57.2	114	56-134	
2-Butanone (MEK)	ug/L	250	246	98	61-138	
2-Chlorotoluene	ug/L	50	48.0	96	73-125	
2-Hexanone	ug/L	250	264	106	58-138	
4-Chlorotoluene	ug/L	50	50.0	100	75-118	
4-Methyl-2-pentanone (MIBK)	ug/L	250	242	97	60-131	
Acetone	ug/L	250	218	87	57-126	
Acrolein	ug/L	250	265	106	56-120	
Acrylonitrile	ug/L	250	248	99	65-127	
Benzene	ug/L	50	51.5	103	75-118	
Bromobenzene	ug/L	50	48.6	97	68-127	
Bromochloromethane	ug/L	50	47.4	95	66-126	
Bromodichloromethane	ug/L	50	53.2	106	75-120	
Bromoform	ug/L	50	45.1	90	61-119	
Bromomethane	ug/L	50	69.5	139	12-184	
Carbon disulfide	ug/L	50	48.1	96	71-123	
Carbon tetrachloride	ug/L	50	58.1	116	73-125	
Chlorobenzene	ug/L	50	49.1	98	80-115	
Chloroethane	ug/L	50	47.1	94	46-133	
Chloroform	ug/L	50	52.0	104	75-117	
Chloromethane	ug/L	50	41.4	83	33-124	
cis-1,2-Dichloroethene	ug/L	50	44.2	88	76-120	
cis-1,3-Dichloropropene	ug/L	50	50.6	101	73-130	
Dibromochloromethane	ug/L	50	48.9	98	69-124	
Dibromomethane	ug/L	50	47.9	96	76-124	
Dichlorodifluoromethane	ug/L	50	31.5	63	36-145	
Ethyl methacrylate	ug/L	50	48.2	96	67-140	
Ethylbenzene	ug/L	50	51.8	104	78-120	
Hexachloro-1,3-butadiene	ug/L	50	52.5	105	79-137	
Iodomethane	ug/L	50	46.0	92	10-184	
Isopropylbenzene (Cumene)	ug/L	50	52.5	105	82-122	
Methyl-tert-butyl ether	ug/L	50	49.1	98	79-125	
Methylene Chloride	ug/L	50	53.1	106	68-126	
n-Butylbenzene	ug/L	50	52.1	104	73-123	
n-Hexane	ug/L	50	51.8	104	71-143	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Third Site
Pace Project No.: 50278956

LABORATORY CONTROL SAMPLE: 2787894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
n-Propylbenzene	ug/L	50	49.5	99	75-119	
Naphthalene	ug/L	50	45.0	90	70-130	
p-Isopropyltoluene	ug/L	50	51.8	104	82-119	
sec-Butylbenzene	ug/L	50	51.4	103	79-119	
Styrene	ug/L	50	49.6	99	80-121	
tert-Butylbenzene	ug/L	50	51.8	104	58-106	
Tetrachloroethene	ug/L	50	54.0	108	70-123	
Toluene	ug/L	50	48.3	97	72-114	
trans-1,2-Dichloroethene	ug/L	50	44.8	90	79-126	
trans-1,3-Dichloropropene	ug/L	50	51.6	103	68-122	
trans-1,4-Dichloro-2-butene	ug/L	50	40.7J	81	34-130	
Trichloroethene	ug/L	50	45.6	91	78-120	
Trichlorofluoromethane	ug/L	50	53.8	108	57-156	
Vinyl acetate	ug/L	200	175	87	50-116	
Vinyl chloride	ug/L	50	48.5	97	55-122	
Xylene (Total)	ug/L	150	147	98	81-118	
4-Bromofluorobenzene (S)	%.			102	85-116	
Dibromofluoromethane (S)	%.			101	75-120	
Toluene-d8 (S)	%.			98	83-111	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALIFIERS

Project: Third Site
Pace Project No.: 50278956

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D4 Sample was diluted due to the presence of high levels of target analytes.

Pace Analytical Services, LLC
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Third Site
Pace Project No.: 50278956

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50278956001	**Trip Blank**	EPA 5030B/8260	604765		
50278956002	**X-D3**	EPA 5030B/8260	604765		
50278956003	**X-D4**	EPA 5030B/8260	604765		
50278956004	**P-1**	EPA 5030B/8260	604765		

WO# : 50278956

50278956

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

Section A — Required Client Information:

Company: Ramboll Environ	Report To: Chuck Goodwin	Attention:
Address: One Indiana Square	Copy To:	Company Name:
Indianapolis, IN 46204		Address:
Email: cgoodwin@ramboll.com	Purchase Order #:	Pace Quote:
Phone (317) 695-8608 Fax:	Project Name: Third Site	Pace Project Manager: mick.mayse@pacelabs.com,
Requested Due Date: Standard TAT	Project #:	Pace Profile #: 2753 / 14

Section C — Invoice Information:

Regulatory Agency:

State / Location: IN

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): Low Level VOC by 8260	Residual Chlorine (Y/N)	
1	Trip Blank	WT	G	2/1/21	—				3				X					X	X		001
2	XD-3	"	"	"	1006				3				X					X	X		002
3	XD-4	↓	↓	↓	1020				3				X					X	X		003
4	P-1	WT	G	2/1/21	1040				3				X					X	X		004
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Level II data package	Vitaly Hopzov/Ramboll	2/1/21	1237	Pace	2/1/21	1237	1.1	Y	N	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Vitaly Hopzov

SIGNATURE of SAMPLER: Vitaly Hopzov DATE Signed: 2/1/21

TEMP in C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Pace Analytical

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: MRP 2/1/21 1316

Courier: Fed Ex UPS Client Pace USPS Other _____

Custody Seal on Cooler/Box Present: Yes No **(If yes)Seals Intact:** Yes No **(leave blank if no seals were present)**

Packing Material: Bubble Wrap Bubble Bags None Other _____

Thermometer: 1 2 3 4 5 6 A B C D E F **Ice Type:** Wet Blue None

Cooler Temperature: 1.4/1.1 **If temp. is over 6°C or under 0°C, was the PM notified?:** Yes No

Temp should be above freezing to 6°C (Initial/Corrected)

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
Are samples from West Virginia? Document any containers out of temp.		✓	All containers needing acid/base pres. Have been CHECKED?: **exceptions: VOA, coliform, LLHg, O&G, and any container with a septum cap or preserved with HCl.** **Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			✓
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓				
Short Hold Time Analysis (48 hours or less)? Analysis:		✓		Present	Absent	N/A ✓
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (Total/Amenable/Free Cyanide)			✓
Rush TAT Requested (4 days or less):		✓	Headspace Wisconsin Sulfide?			✓
Custody Signatures Present?	✓		Headspace in VOA Vials (>6mm):		✓	
Containers Intact?:	✓		Trip Blank Present?	✓		
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Custody Seals?:	✓		
Extra labels on Terracore Vials? (soils only)		✓				

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

Sample Line Item	WGFU	SBS DI BK Kit R	DG9H (VG9H)	VOA VIAL HS (+4mm)	VG9U	DG9U	DG9T	AG0U	AG1H	AG1U	AG3S	AG3C	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H				Matrix	pH <2	pH >9	pH>10
1			3	TB																						WT			
2			↓																							↓			
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Container Codes

Glass

DG9B	40mL Na Bisulfate amber vial	AG0U	100mL unpres amber glass
DG9H	40mL HCl amber voa vial	AG1H	1L HCl amber glass
DG9M	40mL MeOH clear vial	AG1S	1L H2SO4 amber glass
DG9P	40mL TSP amber vial	AG1T	1L Na Thiosulfate amber glass
DG9S	40mL H2SO4 amber vial	AG1U	1liter unpres amber glass
DG9T	40mL Na Thio amber vial	AG2N	500mL HNO3 amber glass
DG9U	40mL unpreserved **amber** vial	AG2S	500mL H2SO4 amber glass
VG9H	40mL HCl clear vial	AG2U	500mL unpres amber glass
VG9T	40mL Na Thio. clear vial	AG3S	250mL H2SO4 amber glass
VG9U	40mL unpreserved **clear** vial	AG3U	250mL unpres amber glass
VGFX	40mL w/hexane wipe vial	AG3C	250mL NaOH amber glass
VSG	Headspace septa vial & HCl	BG1H	1L HCl clear glass
WGKU	8oz unpreserved clear jar	BG1S	1L H2SO4 clear glass
WGFU	4oz clear soil jar	BG1T	1L Na Thiosulfate clear glass
JGFU	4oz unpreserved amber wide	BG1U	1L unpreserved glass
CG3H	250mL clear glass HCl	BG3H	250mL HCl Clear Glass

Plastic / Misc.

BG3U	250mL Unpres Clear Glass
BP1A	1L NaOH, Asc Acid plastic
BP1N	1L HNO3 plastic
BP1S	1L H2SO4 plastic
BP1U	1L unpreserved plastic
BP1Z	1L NaOH, Zn, Ac
BP2A	500mL NaOH, Asc Acid plastic
BP2N	500mL HNO3 plastic
BP2O	500mL NaOH plastic
BP2S	500mL H2SO4 plastic
BP2U	500mL unpreserved plastic
BP2Z	500mL NaOH, Zn Ac
BP3B	250mL NaOH plastic
BP3N	250mL HNO3 plastic
BP3F	250mL HNO3 plastic (field filtered)
BP3U	250mL unpreserved plastic
BP3S	250mL H2SO4 plastic
BP3Z	250mL NaOH, Zn Ac plastic

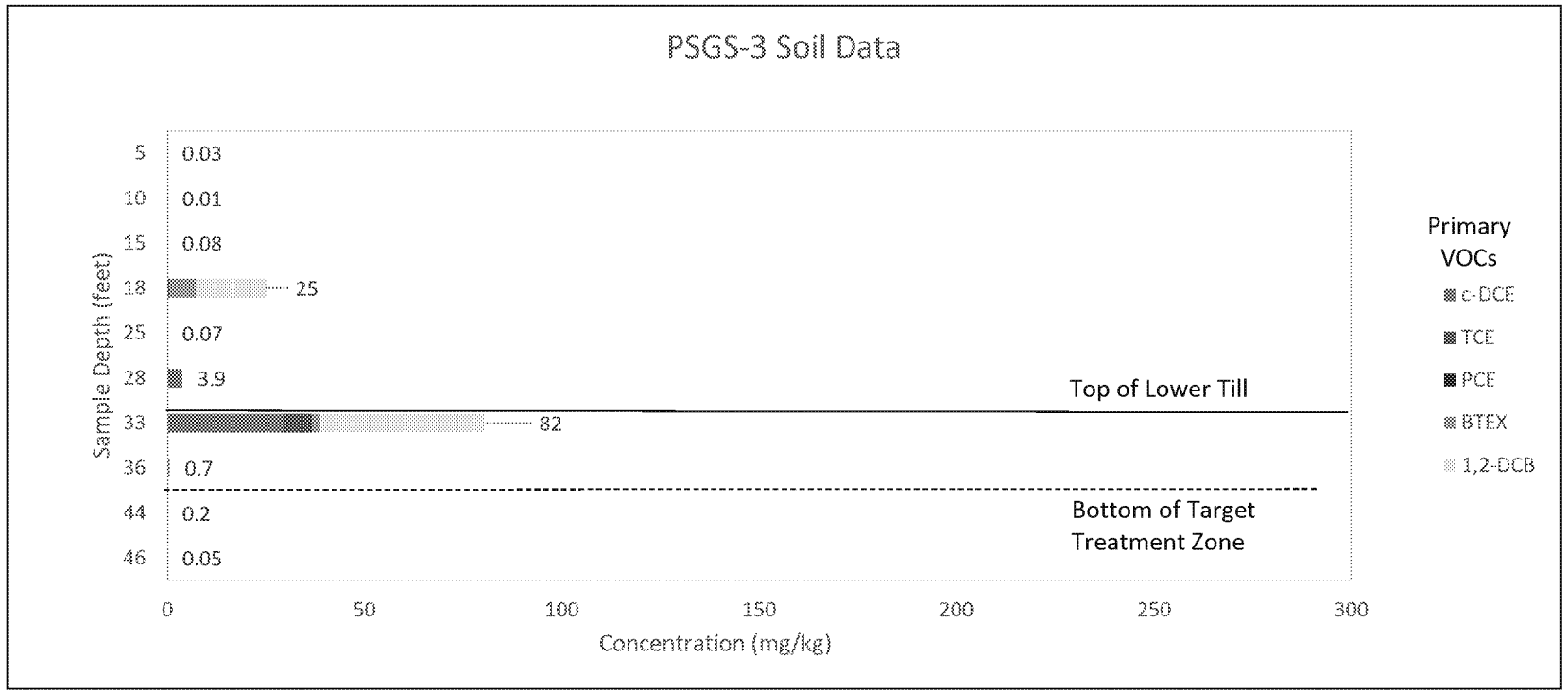
AF	Air Filter
C	Air Cassettes
R	Terra core kit
SP5T	120mL Coliform Na Thiosulfate
U	Summa Can
ZPLC	Ziploc Bag

WT	Water
SL	Solid
NAL	Non-aqueous liquid
WP	Wipe

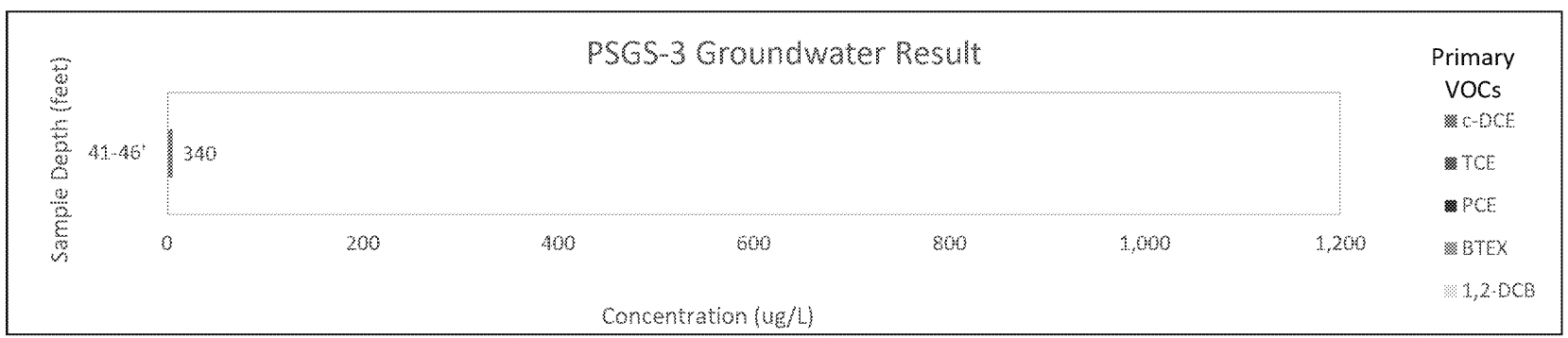
ATTACHMENT B

PSGS Soil Boring Data from Geosyntec (2021b)

Soil and Groundwater Data Plots
PSGS Borings

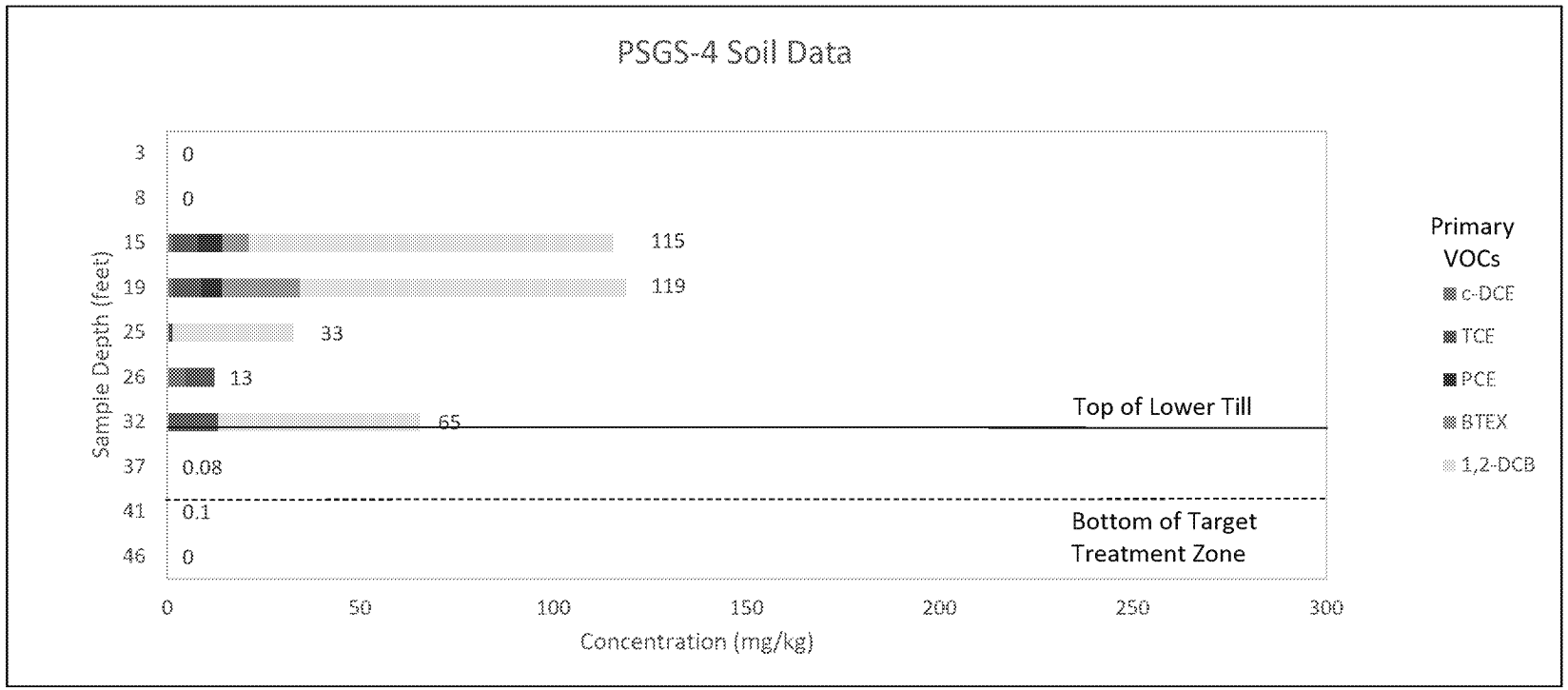


Data labels represent total VOCs (mg/kg). A value of 0 corresponds to no VOCs detected.

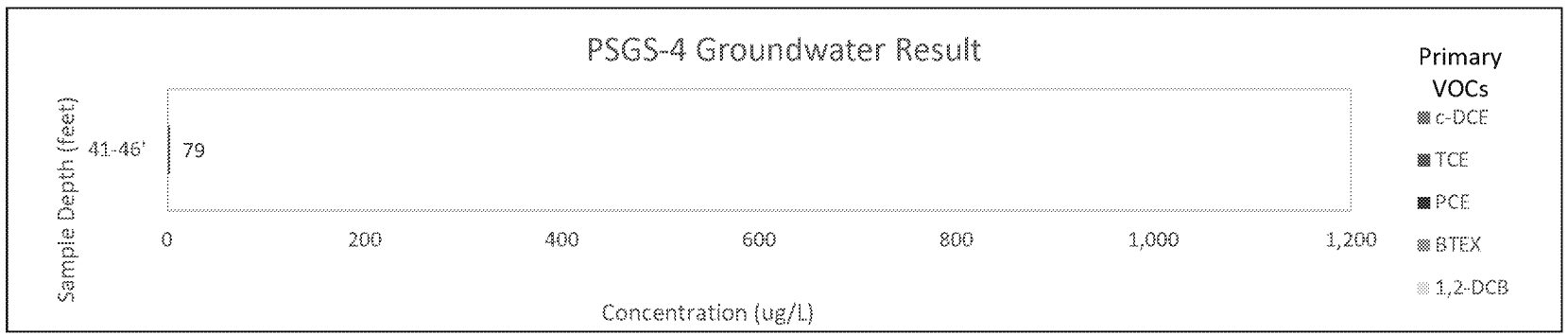


Data labels represent total VOCs (µg/L). A value of 0 corresponds to no VOCs detected.

Soil and Groundwater Data Plots
PSGS Borings



Data labels represent total VOCs (mg/kg). A value of 0 corresponds to no VOCs detected.



Data labels represent total VOCs (µg/L). A value of 0 corresponds to no VOCs detected.